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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,938	11/18/2003	Bong-Joo Kim	45687	3718
1609	7590	08/22/2005	EXAMINER	
ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036			CAO, ALLEN T	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/714,938

Applicant(s)

KIM ET AL.

Examiner

Allen T. Cao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8 is/are rejected.
- 7) ☒ Claim(s) 5-7 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-2, 4 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Hisadomi (US. 6,724,565 B2).

Hisadomi discloses a driving apparatus for loading/unloading a pair of pole-base assemblies (12, 13) which are reciprocated along a guide rail (1, 2) formed on a main deck 21 to move a magnetic tape to contact with a head drum 22, comprising: a first and a second link members (72, 73), each connected with one end to one pole-base assembly; a first and a second loading gears (figures 5-6), each connected to the other ends of the first and the second link members, the first and the second loading gears being engaged with each other to be driven in association with each other (the gear sections 63 of the first loading gear are meshed with the gear sections 65 of the second loading gear); and a main gear (58 including gears 69) which is rotated by power

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received from a driving motor 51 mounted on the main deck, the main gear being selectively engaged with the first loading gear upon rotation thereof; wherein the main gear is rotated in association with one of the loading gears within a desired rotation range upon rotation so as to transfer power to load/unload the pole-base assembly, all as set forth in claim 1.

Regarding claim 2, Hisadomi discloses that the first loading gear comprises a first gear part 63 engaged with the second loading gear 65, and a second gear part 68 stepped with respect to the first gear part 63 so as to be engaged with the main gear 69.

Regarding claim 4, Hisadomi discloses that the second gear part has a gear tooth 68 formed at only a desired region of an outer surface of the first loading gear so as to be engaged with the main gear at only the desired region.

Regarding claim 8, Hisadomi discloses that the main gear has a pair of large gear teeth formed at an outer circumference of the gear teeth receiving the power from the driving motor, and the gear teeth in a predetermined region are engaged or disengaged with the second gear part, starting from the pair of large gear teeth which are relatively larger than the gear "tooth" (see particular figures 5 and 6).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hisadomi in view of Matsuoka et al (US. 6,157,512).

Hisadomi discloses that the second gear part is formed at a upper position than the first gear part and has a smaller diameter than the first gear part.

Hisadomi does not disclose that the second gear part is formed at a lower position than the first gear part and has a larger diameter than the first gear part.

Matsuoka et al discloses a cassette tape loading/unloading mechanism having a main gear 507 meshed with the second part gear 508a of the first loading gear 508; and wherein the second gear part 508a of the first loading gear is formed at a lower position than the first gear part (508c, 508b) and has a larger diameter than the first gear part of the first loading gear (figure 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structural relationship between gear parts of the main loading gear and the first loading gear of the tape loading/unloading mechanism of Hisadomi such that the second gear part is formed at a lower position than the first gear part and has a larger diameter than the first gear part as taught by Matsuoka et al through an obvious rearrange/reversal of parts in order to improve a tape loading/unloading characteristics of the tape loading/unloading mechanism.

5. Claims 5-7 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

a) The prior art of record neither discloses nor suggests the tape loading/unloading mechanism as set forth in claim 2 combined with the limitations of "wherein the second gear part has a large gear groove formed at both ends as a starting point for engagement with the main gear in the rotational direction of the main gear, the gear groove being formed to be relatively deeper than other neighboring gear groove" as recited in claim 5.

b) The prior art of record neither discloses nor suggests the tape loading/unloading mechanism as set forth in claim 2 combined with the limitations of "... a connecting gear part formed at a desired region so as to be engaged with the second gear part at a position lower than the main gear part; a pair of large gear teeth formed at both ends portion of the connecting gear part so as to correspond to each large gear groove, the pair of large gear teeth being larger than the connecting gear part; and a slide wing part protruding in the form of an arc at a position lower than the main gear part so as to slidably contact the outer circumference of the second gear part" as recited in claim 9.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen T. Cao whose telephone number is (571) 272-7569. The examiner can normally be reached on Mon - Thurs (7:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Cao  
Primary Examiner

AC  
August 11, 2005